

AGR delivers a well project for Hunt Oil Company in Browse Basin with pioneering results



OVERVIEW

AGR's Well Management team engaged with Hunt Oil to plan and drill their exploration well Schooner-1 in the Browse Basin offshore Western Australia. The planned vertical well was to be drilled in 270m (MSL) water depth, targeting sand formations between 3500m and 4500m TVDRT using the Stena Clyde Semi-submersible. The project was executed in May 2014.

CHALLENGE

- Safely and efficiently drill, log and abandon a deep high temperature well within approx 60 days in one of Australia's most frequent cyclone areas during cyclone season
- Logistical/Importation challenges of mobilising the required MODU from its prior location in JPDA 279 nm North-East of the Schooner-1 location, which is 228nm (422km) offshore from the Broome supply base, and a further 2,230km by road from the main O&G hub, Perth
- Drill through the notoriously troublesome Grebe sand formation where majority of surrounding offset wells have experienced stuck pipe and costly BHAs lost down hole.

- High temperature environment issues, such as:
 - Drilling Fluid selection
 - Staging procedures for MWD/LWD tools
 - BOP elastomer limitations
 - Heat considerations for mud room personnel due to predicted BHT of 360F

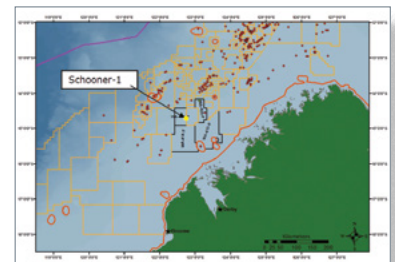
The complicating factors:

- At 4,200m MDRT abnormal torque was observed while there was no hole problems evident. Further investigation found the TDS motor required changing out resulting in 3.42 days of Non-productive time (NPT).

APPROACH

AGR's well delivery process was used to plan and drill Schooner-1. This included well planning, contracting a rig and 3rd party service providers, obtaining environmental and regulatory safety approvals, and day-to-day well management during drilling.

In an endeavor to reduce drilling time for the Client and minimise the potential risks of managing stuck pipe in the known difficult formations, AGR undertook an investigation into the use of several new drilling technologies, such as hybrid bits and riserless mud recovery (RMR) not used in the area before.



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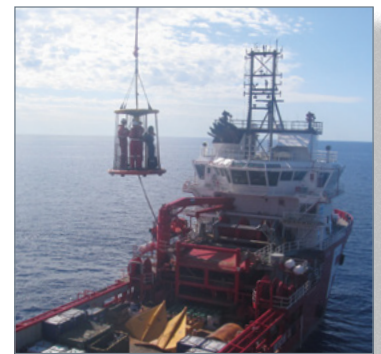


RESULT

- The Schooner-1 well was drilled to beyond 4,000m (TVDRT) before being successfully logged, plugged & abandoned in a total of 68.45 days versus the estimated (mean) of 60.4 days. This was an exceptional result considering that most non-productive time could be attributed to waiting on weather and rig related faults
- Due to the pre-investigation by AGR into new and alternative drilling technologies, a number of pioneering firsts for the Client and the area were achieved on the Schooner-1 well. These include:
 - First well in the area where the 17 1/2" hole section was drilled in one bit run, using a Hybrid bit
 - First well in the area where the 12 1/4" hole section was drilled in one bit run, using a specially selected bit
 - First well in Australia to use dopeless casing
- As a result, the well was able to be delivered to the Client with minimal operational risk exposure and unprecedented drilling rates.

VALUE ADDED

- The Client was provided with invaluable data about range and likelihood of all perceived risks and potential upsides to support critical decision making by AGR's in house well-construction cost and time probability evaluation software, P1™
- All phases of AGR's Well Delivery process was used to design and drill the well as per the NOPSEMA accepted Well Operations Management Plan (WOMP)
- AGR's contract negotiations on behalf of the Client as an independent Well Management consultancy resulted in a combined savings of USD 3.5 MM on procurement costs (excluding operational and logistical savings)
- The Client was able to drill a well in Australia without the need of having a full operations base in the region
- Project was executed within 2.5% of AFE which was an excellent result given the logistical and drilling challenges presented
- Schooner-1 was Hunt Oil's first well drilled in Australia



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